# THE X-12-ARIMA FAME INTERFACE

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An interface has been added to the *X-12-ARIMA program which allows users to input series from a* **FAME** *database, and to store the output series which normally would be written to ASCII datasets in a* **FAME** *database. Of course, the user must have a* **FAME** *license, and the* **FAME Host Language Interface(HLI)** *libraries.*

## 1 UNIX Considerations

*To use the* **FAME** *interface, you must first:*

- *Copy* **fhli.o** *and* **hliinc.txt** *from your* **FAME HLI** *library to your source library.*
- *Edit the Makefile to reflect the path name of your* **FAME** *library instead of* /OPT/FAMELIB/HLI at the beginning of the Makefile where **FAMELIB** is specified.
- Create the **x12a** program and move it to the appropriate library.

*It is useful to create a script like the following to execute the program. Assume that* /usr/famelib is your **FAME** library, that */opt/x12arima/source is your source library for* X-12-ARIMA, and that the executable is **x12a** in */opt/x12arima. The following script sets the* **FAME** *environmental variable, copies* **x12a.mdl** *to your working directory, and calls the program:*

```
#! /bin/csh -f
   setenv FAME /usr/famelib
   cp /opt/x12arima/source/x12a.mdl .
  /opt/x12arima/x12a $*
```

*If the script is named* **x12arima**, *and the input specifications are given in* **input.spc**, *the program can be executed with:*

**x12arima input**

## 2 X-12-ARIMA input

*If a single series is to be retrieved from a* **FAME** *database, give the* **FAME** *series name with the* **name** *keyword in the series spec. Specify the pathname of the database with the* **file** *keyword. If you would like to use the same input control statements with every series in a* **FAME** *namelist, indicate the namelist name with the keyword* **fnlist** *and the* **FAME** *database where the namelist is located with* **fnlmdb**. *(Of course if* **file** *is missing from the series spec and* **fnlmdb** *is given, the program will assume that the* **fnlmdb** *database is where the input series can be found.)*

*You may retrieve user series for regression variables by specifying the* **FAME** *database name with the* **regdb** *keyword in the regression spec. A* **FAME** *namelist of user series may be given with the keyword* **regfulst** *and the pathname of its database with* **regfusdb**.

*To store series in a* **FAME** *database, give the full pathname of the output database with the keyword* **famesave**. *After the output database is specified, all tables retrieved with the* **save** *keyword will be stored in the* **FAME** *database. Normally the* **FAME** *name of the output series will be created by appending the table name to the series name. For example, table* **d8** *for series* **ser** *would be* **ser.d8**. *There are more meaningful extensions, though for certain tables to create more consistency with* **FAME** *names.*

| TABLE | EXTENSION |
|---|---|
| ******* | ********** |
| d10 | seas |
| d11 | adju |
| d12 | tren |
| d13 | irre |
| d16 | comb |
| c16 | trad |

## 3 Sample input - without namelists

```
series{
  format='fame'
  title='Outlier adjustment for furniture'
  name='bfrnrs'
  file='/myhome/mydir/mydb.db'
  span=(1967.1,1989.2)
  famesave='/mysec/secdir/out.db'
}
transform{
        function=log
}
```

```
  regression{
           variables=(
              td ao1973.02 ls1974.11 ls1978.04 ls1981.10
           user=(t1, t2, t3, t4, t5, t6, t7)
           regdb = '/myhome/uservars.db'
           )
  }
  arima{
           model(0 1 1)(0 1 1)
           ma=(
               0.3104
               0.6572
           )
  }
  estimate{
  }
  check{
  }
  x11{
        mode=mult
        title=("Outlier TD run for retail furniture sales")
        print=(
          default
        )
        save=(d10 d11)
   }
```

# 4 Sample input - with namelists

```
series{
  span=(1986.1,1995.12)
  decimals=1
  fnmldb='/myhome/tests/bill/tseries.db'
  fnlist='mylist2'
  famesave='/myhome/bill2/out.db'
}
transform{
  function=log
}
regression{
  regfulst='myregnam'
  regdb = '/myhome/tests/bill/myvar.db'
```

```
  regfusdb = '/myhome/mysec/uservar.db'
  start=1986.1
}
arima{
  model=(0 1 1)(1 0 1)12
  ar=(0.3)
}
estimate{
  tol=10e-4
}
regadjust{
  prior = (user)
  final = (user)
  print = (none usr )
  save = (usr)
}
x11{
  mode=mult
  sigmalim = (1.5 2.5)
  appendfcst = yes
  print=(none b1 replacsib9 seasonal adjustfac tdfac seasadj )
  save =(seasonal adjustfac tdfac seasadj )
}
```